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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,561	12/18/2001	Seppo Rousu	872.0106.U1(US)	2675

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EXAMINER
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NGUYEN, DAVID Q

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 04/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/023,561	<b>Applicant(s)</b> ROUSU, SEPPO	
	<b>Examiner</b> David Q Nguyen	<b>Art Unit</b> 2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments filed 01/18/05 have been fully considered but they are not persuasive.

In response to Applicants' Remark on page 2, Applicants argue that Trikha et al. does not disclose or suggest that a controller, responsive to a first one of the transmitter circuits transmitting, for electronically detuning a second antenna circuit of the mobile station such that the second antenna circuit is mis-matched to the first antenna circuit so as to reduce coupling of the transmitted signal from the first antenna circuit into the second antenna circuit.

Examiner respectfully disagrees because Trikha et al. discloses a portable radio transceiver selectively transmits/receives RF signals in a first frequency band or a second frequency band via the first antenna or second antenna (see col. 2, lines 10-16); and the radio transceiver has a tuning circuit that selectively presents the correct impedance to RF signals in each of the two frequency bands for signal reception/transmission carried out via the first or second antenna (see col. 2, lines 21-24). It is apparent that Trikha et al. does disclose or suggest that a controller, responsive to a first one of the transmitter circuits transmitting, for electronically detuning a second antenna circuit of the mobile station such that the second antenna circuit is mis-matched to the first antenna circuit so as to reduce coupling of the transmitted signal from the first antenna circuit into the second antenna circuit.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of Trikha et al. (US 6,072,993).

Regarding claims 1 and 12, The admitted prior art shows and discloses a method for operating a multi-mode mobile station, wherein at least two modes operate within at least one common range of frequencies (see fig. 2 and page 1 line 28 to page 2, line 1), comprising: transmitting a signal from a first antenna circuit of the mobile station in the common range of frequencies (see fig. 2 and page 1 line 28 to page 2, line 1). The admitted prior art does not disclose a controller, responsive to a first one of said transmitter circuits transmitting, for electronically detuning a second antenna circuit of the mobile station such that the second antenna circuit is mis-matched to the first antenna circuit so as to reduce coupling of the transmitted signal from the first antenna circuit into the second antenna circuit. However, Trikha et al. discloses electronically detuning a second antenna circuit of the mobile station such that the second antenna circuit is mis-matched to the first antenna circuit so as to reduce coupling of the transmitted signal from the first antenna circuit into the second antenna circuit (see col. 2, lines 20-43 and fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above teaching of Trikha et al. to the admitted prior art so that dual mode cellular phones operate in two or more overlapping frequency bands.

Regarding claims 2-3 and 13-14, The admitted prior art also shows wherein the common range of frequencies comprises 1900 MHz; the common range of frequencies comprises 850 MHz (see fig. 2 and page1 line 28 to page 2, line 1).

Regarding claims 4-9 and 15-20, the method of the admitted prior art in view of Trikha et al. also discloses and shows wherein the step of detuning comprises varying an impedance of at least one component that forms a part of the second antenna circuit; wherein the at least one component is comprised of a strip line; wherein the at least one component is comprised of a PIN diode; wherein the at least one component is comprised of a variable capacitance; wherein the at least one component is comprised of a FET diode; wherein the at least one component is comprised of an active component that is put into a passive state (see col. 2, lines 20-42 and fig. 1-4 and description of Trikha et al).

Regarding claims 10-11 and 21-22, the method of the admitted prior art in view of Trikha et al. also discloses and shows wherein the step of detuning comprises operating at least one switch for adding a length of strip line to, or for subtracting a length of strip line from, the second antenna circuit (see col. 2, lines 20-42 and fig. 1-4 and description of Trikha et al); wherein the step of detuning comprises operating at least one switch for connecting a length of strip line to ground, or for disconnecting a length of strip line from ground (see col. 2, lines 20-42 and fig. 1-4 and description of Trikha et al).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Q Nguyen whose telephone number is 571-272-7844. The examiner can normally be reached on 8:30AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moise Emmanuel can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*DN*

David Nguyen

*Erika A. Gaby*  
ERIKA A. GABY  
PRIMARY EXAMINER